

REMARKS

Applicant has amended claim 1 and claim 15 to include the limitation that the activatable species are excited to an ion, plasma or free radical state. Support for this claim is found in paragraph [0034]. Additionally, Applicant has amended claim 15 to include the limitation that the activated cleaning fluid is activated using an activating energy selected from the group consisting of electric energy and photonic energy. Support for this amendment is found in paragraph [0034].

Applicant would like to thank the Examiner for agreeing to meet with Applicant's attorney on May 18, 2005. During the Interview, Applicant's attorney agreed to amend claim 1 and 15 to include the limitation that the activatable species are excited to an ion, plasma or free radical state, which would not be met by mere electrostatic activation disclosed in Barditch and Peltier. Additionally, Applicant's attorney argued that the Sangster reference teaches, at most, only gas activation with electric energy in the Background section, not a mist. The Sangster reference also only teaches an activated mist between the magnets. Whereas, Applicant's invention is capable of sending the activated mist to a remote location for use. Finally, Applicant's attorney asserted that the Weibel reference does not use electric or photonic energy to activate a cleaning fluid.

Referencing the art rejections set forth in the Office Action, claims 1-3, 7 and 11-19 stand rejected under 35 U.S.C. 102 as being anticipated by Sangster (U.S. Patent 5,750,072). As stated by the Examiner, the Sangster reference teaches the recognized conventionality of "activation of

gases with electronic and photonic means while proposing magnetic means as an alternative energy source”. However, the presently claimed invention is directed to the activation of a mist of a cleaning fluid to produce an activated cleaning fluid mist. Although the Sangster reference discloses the use of electromagnetic fields for sterilization, the fields are used only in plasma sterilization processes which employ a gas of ionized charged particles, see column 1, lines 20-23. The Sangster reference also mentions prior methods for sterilizing fluids using “electrical induction”, see column 2, lines 11-13. However, the Sangster reference does not teach or suggest that the electrical induction produces an activated species or that the fluid is in the form of a mist. The Sangster reference clearly relies on the use of a magnetic field to generate a free radical state. In order to sterilize a workpiece, the workpiece must be inserted into the mist or vapor, see column 2, lines 24-27. The use of a magnetic field requires that only “non-metal tools” be exposed to the magnetic field for sterilization, see column 3, lines 42-45. Applicant’s claimed invention using an activator that produces activating energy of electric or photonic energy to generate an activated cleaning fluid mist has several advantages over the prior art. For example, the present invention does not require that the article to be sterilized be introduced into the electronic or photonic fields, thus allowing for sterilization at locations remote from the activator. Additionally, a variety of materials may be decontaminated using Applicants apparatus, including metallic material. For these reasons, Applicant submits that the Examiner’s rejection has been overcome and respectfully requests reconsideration.

Referencing the art rejection set forth in the Office Action, claims 1, 7, 9, 11, 13, 15-17 and 19 stand rejected under 35 U.S.C. 102 as being anticipated by Weibel (U.S. Patent No.

5,648,046). Applicant's claimed invention includes an activation energy of either electric or photonic energy to activate a mist of cleaning fluid. The activated cleaning fluid mist includes activatable species excited to an ion, plasma, or free radical state. In Weibel, a flow of air 2 is directed to an assembly 4 of air ionization electrodes. The air is ionized by the electrodes and annihilates any microbes, viruses and similar microorganisms present in the air (see column 2, lines 18-20). Disinfectant particles are also charged in this process (see column 2, lines 20-22). However, disinfectant particles obtain an electrostatic charge by the ionization of the air (see column 2, lines 54-57). This electrostatic charge causes the disinfectant material to be deposited on the duct wall (see column 2, lines 22-25 and column 3, lines 14-15). This reference does not disclose an activator for the mist of cleaning fluid using either electric or photonic energy. Additionally, this reference does not disclose that the mist particles are activated to an ion, plasma, or free radical state. The prior art is directed only to the electrostatic charging of the disinfectant material so that it may be deposited onto the wall of the ducts. For these reason, Applicant submits that the rejection has been overcome and respectfully requests reconsideration.

Referencing the art rejection set forth in the Office Action, claims 1, 6, 9-11, 13 and 15-19 stand rejected under 35 U.S.C. 102 as being anticipated by Peltier (U.S. Patent No. 5,382,410). The Peltier reference is directed to the application of an electrostatic charge which is applied to a liquid (see Abstract). As stated previously, the claims of the present application include the production of an "activated" cleaning fluid mist including activatable species excited to an ion, plasma, or free radical state. For this reason, Applicant submits that the rejection has been overcome and respectfully requests reconsideration.

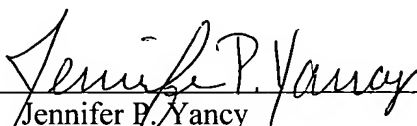
Referencing the art rejection set forth in the Office Action, claims 1, 7, 9-11, 14-15 and 18-19 stand rejected under 35 U.S.C. 102 as being anticipated by Barditch (U.S. Patent No. 4,704,942). The Barditch reference is directed to the application of an electrostatic charge which is applied to a liquid (see Abstract and column 1, lines 35-36)).). As stated previously, the claims of the present application include the production of an “activated” cleaning fluid mist including activatable species excited to an ion, plasma, or free radical state. For this reason, Applicant submits that the rejection has been overcome and respectfully requests reconsideration.

Referencing the art rejection set forth in the Office Action, claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of the references applied above. Since the Applicant has given reasons for the allowance of claim 1, dependent claims 4-5 should be likewise allowed. Therefore, Applicants submits that the rejection has been overcome and respectfully requests reconsideration.

Claims 1-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/140,851. Applicant will submit a terminal disclaimer upon notification of allowable subject matter, but asserts that it is premature to file such a terminal disclaimer at this time. Applicant invites the Examiner to contact the undersigned directly to expedite the filing of a terminal disclaimer upon notification of allowable subject matter.

In view of the foregoing, Applicant respectfully submits that the art rejections are overcome by the amendment to claim 1 and claim 15 to restrict the invention to include activatable species excited to an ion, plasma or free radical state, and that the application is now in condition for allowance. Accordingly, favorable reconsideration and allowance of the application is respectfully requested.

Respectfully submitted,

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